

### REMARKS

Claims 3-13 and 15-32 are now presented for examination. Claims 2, 4, 13, 17, 20, 23 and 24 have been amended to define still more clearly what Applicant regards as his invention, in terms which distinguish over the art of record. . Claims 3, 4, 13, 17, 20, 23 and 24 are the only independent claims.

Claims 3-13 and 15-32 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,727,135 (Webb, et al.) and U.S. Patent 5,760,412 (Yang, et al.) and U.S. Patent 6,148,241 (Ludtke, et al.). With regard to the claims as currently amended, this rejection is respectfully traversed.

Independent Claims 3, 13 and 23 as currently amended are directed to an arrangement for controlling a remotely controllable apparatus from an external device connected to the remote controllable apparatus in which the apparatus has a control panel specifying a process operation and a reader that reads an image of a document and which is operated according to an indication from the control panel and/or and externally supplied command. According to the arrangement, it is detected that the document has been set to the reader before the reader starts a document reading operation. In response to the document detection, the external device is caused to display a virtual control panel without any user's instruction after the document detection. The virtual control panel for user interaction causes the user to instruct the reader to perform a document reading operation with the virtual control panel having an appearance identical with or similar to at least a part of the control panel. A command of the remotely controllable apparatus corresponding to the operation of the virtual control panel by the user is generated. The generated command is supplied to the remotely controllable apparatus to

cause the reading operation of the detected document to start based on the instruction through the virtual control panel by the user.

Independent Claim 4 as currently amended is directed to a remote control system has a remotely controllable apparatus with a control panel that specifies a processing operation and a reader that reads an image of a document and that operates according to an indication from the control panel and/or an externally supplied command, an information processing apparatus capable of supplying a command to the remotely controllable apparatus and a display unit and input device connected to the information processing apparatus. In the information processing apparatus, a detecting unit detects that the document has been set to the reader before the reader starts a document reading operation. A display device displays on the display unit a virtual control panel without any user instruction after detecting the document. The virtual control panel for user interaction causes the user to instruct the reader to perform a document reading operation with the virtual control panel having an appearance identical to or similar to at least part of the control panel. A discriminating unit establishes correspondence between a command, which operation of the control panel causes to be applied to the remotely controllable apparatus, and an operation performed on the virtual control panel by the user. A communication unit supplies the remotely controllable apparatus with the command corresponding to the operation performed on the virtual control panel to cause start of the reading operation of the detected document based on the instruction through the virtual control panel by the user.

Independent Claims 17 and 20 are directed to an information processing arrangement in a data processing system that has a data processing apparatus with a control panel that specifies a process operation and a reader that reads an image of a document and that is operated according to an indication from a control panel and/or an externally supplied command, an information processing apparatus capable of supplying a command to the data processing apparatus, a display unit and input device connected to the information processing apparatus and an image input device connected to the information processing apparatus to read the image of a document and supply the information processing apparatus with the read image. In the information processing apparatus, a detecting unit detects that the document has been set to the reader before the reader starts a document reading operation. A display device displays on the display unit a virtual control panel without any user instruction after detecting the document. The virtual control panel for user interaction causes the user to instruct the reader to perform a document reading operation with the virtual control panel having an appearance identical to or similar to at least part of the control panel. A discriminating unit establishes correspondence between a command, which operation of the control panel causes to be applied to the remotely controllable apparatus, and an operation performed on the virtual control panel by the user. A communication unit supplies the remotely controllable apparatus with the command corresponding to the operation performed on the virtual control panel to cause start of the reading operation of the detected document based on the instruction through the virtual control panel by the user.

Independent Claim 24 as currently amended is directed to a method of controlling an image processing terminal connected to an image reading device in which a signal indicating that a document has been set to the image reading device is received before the image reading device starts a reading operation of the document. In response to the signal, a virtual control panel is displayed without any user instruction after the document detection. The virtual control panel for user interaction causes the user to instruct a reader to perform a reading operation of the document set in the image reading device. A command instructing the image reading device is transmitted based on manipulation of the displayed virtual control panel by the user.

In Applicant's view, Webb, et al. discloses a multiple printer status arrangement that provides bidirectional communications between a host computer and a selected printer connected to the host, either locally or by way of a network. The bidirectional communications are used to provide a user of the host with access to a substantially real-time, visual and functional replica of the operator panel of the selected printer. A user at the host computer may also visually monitor the status of multiple printers at the same time from the same host display.

In Applicant's opinion, Yang, et al. discloses an arrangement for sensing the presence of a document on the transparent surface of an optical scanner that involves moving a scanner optics carriage to a predetermined position beneath the transparent surface, reading a line of data, and if any of the data is on the "white" side of the gray-scale relative to a threshold, determining that a document is present in the scanner. Optionally, before determining whether a document is present, the apparatus and method may perform an initial threshold comparison to check for the presence of a dark background to ensure that an old document has been removed

before the new document is read. The results of the document presence determination are used to generate a signal which is sent through a scanner interface to the host computer for use in automatically initiating a complete scan of a new document.

Ludtke, et al., in Applicant's view, discloses a user interface for a networked target device that uses panel subunit descriptor information maintained by the target device. A panel subunit allows any compliant device (e.g., a target device) to describe the appearance of its physical (and logical) controls and displays to another device (e.g., an intelligent controller) and allows the controller to trigger actions on the target as if a user had physically manipulated the controls on the target device directly. The panel subunit uses objects defined with several standard types of controls and displays (e.g., push buttons, sliders, dials, LCD screens, etc.) that are commonly found on consumer electronic devices. The control types have well defined behaviors (e.g., buttons are pushed, dials are moved, values are input, etc.). In addition, the panel subunit defines a set of commands which are to be applied to any of these controls when selected by the user. The commands are defined to be sufficiently generic so that they apply to most types of controls. The panel subunit also defines generic user interaction commands (or user events) which can be applied to the controls (e.g., press, press and hold, release, input value, etc.) by a user. The purpose of these user events is to encapsulate the typical user manipulated action for the controls and to let the target device decide the manner in which to interpret the user actions on its own. A status descriptor keeps the intelligent controller informed of the status of the target device being manipulated.

It is a feature of Claims 3, 4, 13, 17, 20, 23 and 24 that it is detected that a document has been set before the reader starts a reading operation of the document. It is another feature that an external device is caused to display a virtual control panel in response to the detection of the document without any user instruction after the detection for user interaction to instruct the reader to perform a read operation and a further feature that the virtual control panel has the appearance identical or similar to at least part of the remotely controllable apparatus control panel.

Webb, et al. discloses an arrangement in which a host computer is in communication with multiple printers. In Webb, et al., a host computer 11 is connected to printer 16. An operator panel 35 is provided on the printer and a replica of the panel is provided at a dialogue box 63 of the host computer 11. As noted by the Examiner, Webb, et al. does not specifically show that the remote apparatus has a reader performing a reading operation and detecting that the document has been set to the reader, per se. The Webb, et al. arrangement discloses at lines 30 to 44 of column 12 that a printer state manager checks printer status information on a polling basis so that printer configuration changes, device status alerts and changes to the printer operating panel are passed on to the host computer. Accordingly, Webb, et al. only discloses displaying alert information when, of example, a paper jam or an out-of-paper state is detected. Webb, et al., however, fails to teach or suggest the features of Claims 3, 4, 13, 17, 20, 23 and 24, of detecting that a document has been set before the reader starts a reading operation of the document or that an external device is caused to display a virtual control panel in response to the detection of the document without any user instruction after the detection.

Yang, et al. may teach an automatic sensing arrangement that is used in a remote controllable apparatus (i.e., an optical scanner). As disclosed at lines 41-67 of column 6 with respect to Fig. 5 of Yang, et al., Yang, et al. only teaches that an operator begins a scanning program during which the host computer periodically polls the scanner by issuing an inquiry to the scanner to obtain the scanner status. In the inquiry, a New Document flag is checked. If the New Document flag is determined to be set in response to the inquiry, a scan command is issued by the host and the normal scanning routine is performed. Yang, et al., however, is directed away from and fails to suggest the features of Claims 3, 4, 13, 17, 20, 23 and 24, of detecting that a document has been set before the reader starts a reading operation of the document or of an external device that is caused to display a virtual control panel in response to the detection of the document without any user instruction after the detection.

Since neither Webb, et al. nor Wang, et al. in any manner suggest the features of Claims 3, 4, 13, 17, 20, 23 and 24, it is not seen that the addition of Yang, et al.'s new document detection arrangement that is controlled by inquiry of the host computer during a host computer initiated scanning program to Webb, et al.'s checks on printer status information by a host computer on a polling basis to communicate printer configuration changes, device status alerts and changes to the printer operating panel could possibly suggest the claimed feature of document detection being set before the reader starts a reading operation of the document combined with the claimed feature of an external device being caused to display a virtual control panel in response to the detection of the document without any user instruction after the detection. Further, it is not seen that it would be recognized that the alert information display of

Webb, et al. is replaceable by the completely different arrangement of a display for instructing a start scanning operation of Yang, et al. Accordingly, it is believed that Claims 3, 4, 13, 17, 20, 23 and 24 are completely distinguished from any combination of Webb, et al. and Yang, et al.

Ludke, et al. may disclose a user interface for a networked target device which allows any compliant device to describe the appearance of its controls and displays to another device so that the target device display appears at a controller. The Ludke, et al. disclosure, however, is devoid of any suggestion of the feature of displaying a virtual control panel in response to the detection of a document having been set to a reader before the reader starts a read operation of the document without any user instruction after the detecting of the document as in Claims 3, 4, 13, 17, 20, 23 and 24. Since none of the cited references in any manner suggest the combination of document detection being set before the reader starts a reading operation of the document and of an external device being caused to display a virtual control panel in response to the detection of the document without any user instruction after the detection as recited in Claims 3, 4, 13, 17, 20, 23 and 24, it is believed that Claims 3, 4, 13, 17, 20, 23 and 24 as currently amended are completely distinguished from any combination of Wee, et al., Yang, et al. and Ludke, et al. and are allowable.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

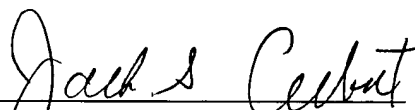


The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's attorney, Scott D. Malpede, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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Jack S. Cubert  
Attorney for Applicant  
Registration No. 24,245

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3800  
Facsimile: (212) 218-2200